# Behavior in All-Pay and Winner-Pay Auctions with Identity-Dependent Externalities*

**Bettina Klose**
Institute for Strategy and Business Economics, University of Zurich,
8032 Zurich, Switzerland

**Roman Sheremeta**
Argyros School of Business and Economics, Chapman University,
Orange, CA 92866, U.S.A.

September 2010

**Abstract**

We experimentally investigate all-pay and winner-pay auctions with positive and negative identity-dependent externalities. We use a symmetric three player environment with complete information. The results of the experiment indicate that behavior strongly depends on the payoff space. Although the all-pay auction yields higher revenue than the winner-pay auction in environments with negative identity-dependent externalities (caused by both overbidding in the all-pay and under-bidding in the winner-pay auction), average revenue and bids approximate their theoretical predictions closely in treatments with positive identity-dependent externalities or without identity-dependent externalities when subjects are experienced. Furthermore, we observe that even experienced subjects do not randomize continuously but rather bimodal in our all-pay auction treatments. While average bids are very close to the risk-neutral Nash equilibrium prediction for the treatment with positive identity-dependent externalities, they remain significantly higher in both other treatments. We estimate coefficients for risk- and loss-aversion and find that the observed bid distributions are well explained when allowing for an s-shaped utility function.

*We are grateful to Jack Barron, Tim Cason, Nils Mattis Görnemann, Andrea Günster, Dan Kovenock, and Ralph Siebert for helpful comments and assistance.